

Patent claims

1. Adapter for coupling a substance to be coupled to a cell surface, comprising
 - a) a section for recognition of and binding to the substance to be coupled, and
 - 5 b) a recombinant section for arranging the adapter on the cell surface having an affinity for one or more negatively charged cell surface structures.
2. Adapter according to claim 1, comprising a section for recognition of and binding to the adenoviral fibre knob protein as section a), wherein the section comprises a part of the extracellular domain of the coxsackie adenovirus receptor (CAR) or a part of
10 equivalent function.
3. Adapter according to one of claims 1 or 2, characterized in that section b) of the adapter is chosen from:
 - a peptide 6 or more amino acids long, at least half of which contain guanidino and/or amidino side chains,
 - 15 - an oligopeptide having at least 6 arginine side chains,
 - a peptide of the amino acid sequence corresponding to the basic region of the HIV tat protein,
 - the third helix of a homoeobox protein, and
 - a section of protein VP22 of the herpes simplex virus which mediates
20 anchoring to a cell surface.
4. Adapter according to one of the preceding claims, furthermore comprising an oligomerization section for formation of di-, tri- and/or oligomers of the adapter.
5. Adapter according to one of the preceding claims, furthermore comprising a
25 leader sequence for effecting synthesis of the adapter into the rough endoplasmic reticulum.
6. Nucleic acid having a section which codes for an adapter according to one of the preceding claims.

7. Virus for expressing an adapter according to one of claims 1 to 5, wherein the virus has, in one stage of its multiplication, a virus envelope, and wherein the virus contains:

- a nucleic acid according to claim 6 and

5 - a nucleic acid section for expression of a protein of the virus envelope to which section a) of the adapter can couple.

8. Use of an adapter according to one of claims 1 to 5 for non-therapeutic mediation and/or improvement of the coupling of a substance to a cell surface.

9. Method for non-therapeutic coupling of a substance to a cell surface, comprising
10 the steps:

a) exposure to an adapter according to one of claims 1 to 5 of the substance which is to be coupled in order to provide the substance with the adapter, and

b) exposure of the cell surface to the substance which is to be coupled and is
15 provided with the adapter.

10. Use of an adapter according to one of claims 1 to 5 for the preparation of a medicament for mediation and/or improvement of the coupling of a substance to a cell surface.

11. Use of a virus according to claim 7 for the preparation of a medicament for
20 mediation and/or improvement of the coupling of a substance to a cell surface.

12. Medicament for mediation and/or improvement of the coupling of a substance to a cell surface, comprising

- an adapter according to one of claims 1 to 5 and/or a virus according to claim 7 and
- a pharmaceutically acceptable carrier.